

10/072,402

AMENDMENTS TO THE CLAIMS

1. (currently amended) A graft polymer comprising a backbone moiety and at least one moiety grafted onto the backbone moiety, wherein said backbone and grafted moieties comprise a hydrophobe and an amine or amide wherein said backbone is selected from the groups consisting of a natural polymer, a non-polymer, and homopolymers and copolymers formed from monomers selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, itaconates, styrenics, unsaturated hydrocarbons, acrylonitrile, nitrogen functional monomers, vinyl esters, alcohol functional monomers, glycols, epoxides, and unsaturated hydrocarbons.

A2
Claims 2-6 are cancelled.

7. The graft polymer of claim 1 comprising a backbone moiety consisting of both a hydrophobic moiety and an amine moiety, wherein said grafted moiety is an amine, amide, or mixture thereof.
8. The graft copolymer of claim 1 wherein said amine comprises a quaternized amine, N-oxide, alkoxylated amine, or mixture thereof.
9. The graft copolymer of claim 1 wherein said amine is at least partially neutralized.
10. The graft polymer of claim 1 wherein the weight ratio of said amine to said hydrophobe is from 1000:1 to 1:1000.
11. The graft polymer of claim 10 wherein the weight ratio of said amine to said hydrophobe is from 100:1 to 1:100.
12. The graft polymer of claim 11 wherein the weight ratio of said amine to said hydrophobe is from 10:1 to 1:10.
13. The graft polymer of claim 11 wherein the weight ratio of said amine to said hydrophobe is about 1:1.
14. (currently amended) A detergent or cleaning composition comprising the ~~a graft polymer of claim 1 comprising~~ a backbone moiety and at least one moiety grafted onto the backbone moiety, wherein said backbone and grafted moieties comprise a hydrophobe and an amine or amide, and an ingredient selected from the group consisting of a surfactant, builder, enzyme, perfume, optical brightener, fillers, anti-fungal and anti-microbial agents, pigments, co-builders, anti-oxidants, dispersants, anti-foaming agents, acids, bases, preservatives, water-

10/072,402

softening agents, sunscreen agents and mixtures thereof.

15. A treated substrate comprising a substrate having associated thereon the graft copolymer of claim 1.
16. The treated substrate of claim 15, wherein said substrate is selected from the group consisting of textiles, fabrics, ceramics, paper, leather, wood, hair, skin, metal, tile, carpet, floor coverings, cementitious substrates, glass, plastic, non-wovens, concrete, insulation, mineral slurries, and shale
17. A control release formulation comprising an active substance encapsulated, coated, or associated with the graft copolymer of claim 1.
18. The control release formulation of claim 17, wherein said active substance comprises at least one water-soluble substance, at least one water-insoluble substance, or a mixture thereof.
19. A method for the delivery of an active ingredient comprising:
- a) coating or encapsulating an active ingredient with the graft copolymer of claim 1;
 - b) introducing said coated or encapsulated active ingredient into an aqueous environment; and
 - c) decreasing the pH of the aqueous environment to solubilize the graft copolymer, thereby releasing the active ingredient.
- ~~17.~~ 20. (currently amended) The method of claim ~~16~~ 19 wherein the aqueous environment of step b) has a pH of greater than pH 8, and wherein the pH of said aqueous environment is lowered below pH 8 in step c).